

Claims:

1 1. A method for scheduling data packets comprising:
2 segmenting each data packet into data segments;
3 assigning a slack value to each data segment of a
4 packet, where the slack value is a function of a deadline of
5 the packet and an estimated transmission time of the packet;
6 and
7 scheduling data segments for transmission based on
8 slack values of data segments.

1 2. The method according to claim 1, further
2 comprising:

3 decreasing the slack value of a segment if a
4 transmission opportunity is missed.

1 3. The method according to claim 1, wherein the slack
2 value is measured in terms of the amount of transmission
3 opportunities that can be missed.

1 4. The method according to claim 1, further
2 comprising:

3 looking ahead to locate packets which will exceed
4 requirements and deleting such packets.

1 5. A transmission apparatus comprising:
2 a plurality of data streams;
3 a transmitter connected to said plurality of data

4 streams;
5 a scheduler for determining which data stream will be
6 serviced by said transmitter;
7 said scheduler selecting a data stream for service
8 based on a slack value of data segments in each stream,
9 wherein the slack value is a function of the deadline and
10 the estimated transmission time.

1 6. The apparatus according to claim 5, wherein said
2 scheduler segments data packets in said data streams into
3 data segments.

1 7. The apparatus according to claim 5, wherein said
2 scheduler decreases slack values when a transmission
3 opportunity is missed.

1 8. The apparatus according to claim 5, further
2 comprising a slack value assigner for assigning said slack
3 values to said data segments.

1 9. The method of transmitting data comprising:
2 connecting a transmitter to a plurality of data streams
3 for transmission;
4 assigning slack values to data in said data streams,
5 said slack value being a function of a deadline of said data
6 and an estimated transmission time; and

1 scheduling the data streams for transmission by said
2 transmitter, said scheduling being determined by said slack
3 values.

1 10. The method according to claim 9, wherein data
2 packets in said data streams are segmented into data
3 segments.

1 11. The method according to claim 10, wherein slack
2 values are assigned to each data segment.

1 12. The method according to claim 11, wherein each
2 slack value is decreased for every transmission opportunity
3 missed.